

THE VENOM OF THE FISH, *NOTESTHES ROBUSTA*.

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(Communicated by A. R. McCulloch.)

That the Bullrout is a very awkward customer to handle, is an undisputed fact, but the virulence, or otherwise, of the wounds inflicted by the spines about its head, is a "questio vexata" on which the best known authorities differ.

As during some years' residence on the northern rivers of New South Wales, I was frequently brought into contact with cases of "sting" from this fish, I can speak with professional experience of the symptoms presenting on such wounds.

Tenison-Woods(1), in his description of the Bullrout, gives a fairly accurate account of the ordinary symptoms met with, and I can confirm his statements, with one exception, viz., that the pain disappears at sunset. Though I am not prepared to say that it never does, I have not found it the usual condition. I have seen several cases where the agony remained unabated for twenty-four hours or more, only to be relieved by morphia or other analgesic drug.

Ogilby(2) summarily dismisses the idea of the spines of the Bullrout being toxophorous, without sufficient justification, as my experience teaches me exactly to the contrary.

The symptoms are in no way confined to the mere pain and discomfort of an ordinary cut or scratch, or the irritation arising therefrom. There are very marked and distinct symptoms of the direct effect of venom.

The first of these to manifest itself is the rapid appearance of an erythematous blush, which spreads around the wound for some distance, in a manner not noticeable in ordinary incised wounds; the pain is out of all proportion to the very insignificant nature of the injury; it radiates in an altogether abnormal manner, com-

pared with ordinary pricks or scratches, in many cases extending to the shoulder, or even up the side of the neck; the temperature varies greatly, in most cases going up two, three, or more degrees within a very short time: lasting thus for a varying time, and going down again as rapidly, often below the normal, when severe collapse occurs, necessitating the free administration of stimulants to counteract the heart-failure which threatens.

Cases treated as in the ordinary methods for snakebite —chiefly I have found permanganate the most efficacious — can be relieved considerably if taken in hand soon after the sting; but if the poison has had time to put in its fine work, so much the longer does the recovery take. Extreme prostration, for several days, often follows the stings, leaving the patient weak and exhausted.

These symptoms are not compatible with non-toxic wounds. They are undoubtedly venomous.

LITERATURE.

1. TENISON-WOODS, Fish and Fisheries, N. S. Wales, 1882, p.48.
2. OGILBY, Ed. Fish. N. S. Wales, 1893, p.68; and Proc. Roy. Soc. Qsld., xviii., 1903, p.21.